

CLAIMS

What is claimed is:

1. An expert system for assisting an operator in analyzing an embroidery design which will be used by an embroidery machine to create an embroidered fabric, said expert system comprising:

a knowledge base of a plurality of parameters relating to embroidery designs;

a rules base of rules interrelating two or more of the parameters;

selection software for designating a defined parameter from the plurality of parameters;

analysis software for applying the rules to the defined parameter and for generating one or more recommended parameters as a function of the defined parameter; and

display software for providing a display corresponding to the defined parameter and the one or more recommended parameters.

2. The system of claim 1 wherein the parameter is selected from the following categories of parameters: hooping technique, stabilization technique, topping material, backing material, thread weight, thread type, needle type, needle size, embroidery density, project/fabric type, fabric thickness, fabric density, fabric stretch and design size.

3. The system of claim 1 wherein the selection software permits the operator to select a parameter and wherein the selection software designates the defined parameter as a function of the operator selected parameter.

4. The system of claim 3 wherein the selected parameter is project/fabric type wherein the selection software

designates two or more defined parameters and wherein the defined parameters comprise fabric thickness and fabric stretch.

5. The system of claim 4 wherein the operator may modify the defined parameter.

6. The system of claim 1 wherein the operator may modify the defined parameter and wherein the analysis software applies the rules to the modified defined parameter.

7. The system of claim 3 wherein the knowledge base includes comments, photographs or multimedia presentations which are a function of the selected parameter, the defined parameter, and/or one or more of the recommended parameters and wherein the display software displays the provided comments, photographs or multimedia presentations.

8. A method for assisting an operator in analyzing an embroidery design using a knowledge base of parameters relating to embroidery designs and a rules base of rules interrelating the parameters, said method comprising the steps of:

designating a defined parameter relating to the embroidery design;

applying the rules to the defined parameter;

generating one or more recommended parameters as a function of the application of the rules to the defined parameter; and

displaying the defined parameter and the one or more recommended parameters.

9. The method of claim 8 wherein the defined parameter is selected from the following plurality of parameters: hooping technique, stabilization technique, topping material,

backing material, thread weight, thread type, needle type,
5 needle size, embroidery density, project/fabric type, fabric
thickness, fabric density, fabric stretch and design size.

10. The method of claim 8 further comprising selecting a
parameter and designating the defined parameter as a function
of the selected parameter.

11. The method of claim 10 wherein the selected
parameter is the project/fabric type, further comprising the
step of designating two or more defined parameters and wherein
the defined parameters comprise fabric thickness and fabric
stretch.

12. The method of claim 11 further comprising modifying
the defined parameter.

13. The method of claim 8 further comprising modifying
the defined parameter.

14. The method of claim 8 further comprising providing
comments, photographs, or multimedia presentations which are
a function of the selected parameter, the defined parameter,
and one or more recommended parameters and displaying the
provided comments, photographs or multimedia presentations.

15. A system for assisting an operator in analyzing an
embroidery design which will be used by an embroidery machine
to create an embroidered fabric, said system comprising:
a personal computer including:

a knowledge base memory of parameters relating to
embroidery designs; and

a rules base memory of rules interrelating the
parameters;

and including a processor for executing:

10 selection software for designating a defined parameter;
 analysis software for applying the rules to the defined
parameter and for generating one or more recommended
parameters as a function of the defined parameter; and
 display software for providing a display corresponding to
15 the defined parameter and the one or more recommended
parameters.

16. The system of claim 15 wherein the defined parameter
is selected from the following plurality of parameters:
hooping technique, stabilization technique, topping material,
backing material, thread weight, thread type, needle type,
5 needle size, embroidery density, project/fabric type, fabric
thickness, fabric density, fabric stretch and design size.

17. The system of claim 15 wherein the selection
software permits the operator to select a parameter and
wherein the selection software designates the defined
parameter as a function of the operator selected parameter.

18. The system of claim 17 wherein the selected
parameter is project/fabric type wherein the selection
software designates two or more defined parameters and wherein
the defined parameters comprise fabric thickness and fabric
5 stretch.

19. The system of claim 18 wherein the operator may
modify the defined parameter.

20. The system of claim 15 wherein the operator may
modify the defined parameter and wherein the analysis software
applies the rules to the modified defined parameter.

21. The system of claim 17 wherein the knowledge base
includes comments, photographs, or multimedia presentations

2025 RELEASE UNDER E.O. 14176

which are a function of the selected parameter, the defined
parameter, and/or one or more of the recommended parameters
and wherein the display software displays the provided
comments, photographs, or multimedia presentations.

5

TAC 9764.1
PATENT